

**PURCHASING DEPARTMENT  
3025 EAST KEARNEY STREET  
SPRINGFIELD, MO 65803**

REQUEST NO.	D8PP-10061
DATE	April 8, 2010
PAGE NO.	1
NO. OF PAGES	40

SEALED BIDS, SUBJECT TO THE ATTACHED CONDITIONS WILL  
BE RECEIVED AT THIS OFFICE UNTIL

**1:00 p.m., Local Time, May 13, 2010**

AND THEN PUBLICLY OPENED AND READ FOR FURNISHING  
THE FOLLOWING SUPPLIES OR SERVICES.

**BIDS TO BE BASED F.O.B. MISSOURI DEPARTMENT OF  
TRANSPORTATION**

Submit net bid as cash discount stipulations will not be considered  
District 8 Office and Garage

DEFINITE DELIVERY DATE SHOULD BE SHOWN. THE BIDDER MUST SIGN AND RETURN BEFORE DATE AND TIME SET  
FOR OPENING.

**BUYER:** Andy McNeill, CPPB

**BUYER TELEPHONE:** 417-895-7645

**BUYER EMAIL:**

Andrew.McNeill@modot.mo.gov

**SUPPLIES OR SERVICES**

To establish a contract to furnish a  
**“STRUCTURED TELECOMMUNICATIONS CABLING SYSTEM”**  
 with an effective date of the “Notice to Proceed”, until  
 100 calendar days after the Notice to Proceed,  
 in accordance with the following pages.

**Components of Agreement:** The Agreement between MHTC and the successful Bidder shall consist of: the RFB and any written amendments thereto, the "Standard Bid/Proposal Provisions, General Terms and Conditions and Special Terms and Conditions" that are attached to this RFB, the bid submitted by the Bidder in response to the RFB and the post-award contract agreement signed between the parties. However, MHTC reserves the right to clarify any relationship in writing and such written clarification shall govern in case of conflict with the applicable requirements stated in the RFB or the Bidder's bid. The Bidder is cautioned that its bid shall be subject to acceptance by MHTC without further clarification.

**Return sealed bid to the address shown at the top of this page.**

(SEE ATTACHED FOR TERMS, CONDITIONS, AND INSTRUCTIONS)

*In compliance with the above Request For Bid, and subject to all conditions thereof, the undersigned bidder agrees to furnish and deliver any or all the items on which prices were bid within the timeframe specified herein, after receipt of formal purchase order.*

**Date:** \_\_\_\_\_  
**Telephone No.:** \_\_\_\_\_  
**Fax No.:** \_\_\_\_\_  
**Federal I.D. No.** \_\_\_\_\_  
**Email Address:** \_\_\_\_\_

**Firm Name:** \_\_\_\_\_  
**Address:** \_\_\_\_\_  
**By (Signature):** \_\_\_\_\_  
**Type/Print Name** \_\_\_\_\_

**Is your firm MBE  
certified?** ☐ Yes ☐ No

**Title:**  
**Is your firm WBE  
certified?** ☐ Yes ☐ No

## **1. INTRODUCTION AND GENERAL INFORMATION**

### **1.1 Introduction:**

- 1.1.1 This Request For Bid seeks bids from qualified organizations to provide a Structured Telecommunications Cabling System located at the Missouri Department of Transportation, District Office and Garage, located at 3025 East Kearney Street, with an effective contract period from the Notice to Proceed through 100 calendar days following the Notice to Proceed, to the Missouri Highways and Transportation Commission (MHTC) and Missouri Department of Transportation (MoDOT). Each bid must be mailed in a sealed envelope to Mr. Andy McNeill, CPPB, MoDOT District 8, Purchasing Department, P.O. Box 868, Springfield, MO, 65803, or hand-delivered in a sealed envelope to the Purchasing Office in the MoDOT District Office at 3025 East Kearney Street, Springfield, MO 65803. All questions regarding the RFB shall be submitted to Andy McNeill. Bids must be returned to the office of Andy McNeill, no later than 1:00 p.m., CST, May 13, 2010.

- 1.1.2 **Madatory site visits may be scheduled by appointment only on April 19 thru April 22, 2010. Contact Lisa Mattocks at 417-895-7666 to schedule.**

#### **RFB Coordinator:**

**Andy McNeill, CPPB**

**Intermediate Procurement Agent**

**Missouri Department of Transportation**

**3025 East Kearney Street**

**Springfield, MO 65803**

**PHONE: 417-895-7645**

**FAX: 417-895-6704**

**EMAIL: Andrew.McNeill@modot.mo.gov**

### **1.2 General Information:**

- 1.2.1 This document constitutes an invitation for competitive, sealed bids for the procurement of a Structured Telecommunications Cabling System-as set forth herein.
- 1.2.2 Organization - This document, referred to as a Request for Bid (RFB), is divided into the following parts:
- 1) Introduction and General Information
  - 2) Scope of Work
  - 3) Bid Submission
  - 4) Pricing Page
  - 5) Exhibit(s)
  - 6) Terms and Conditions
- 1.2.3 This document contains requirements related to the newly revised statute. Effective January 1, 2009 and pursuant to RSMo 285.530 (1), no business entity or employer shall knowingly employ, hire for employment, or continue to employ an unauthorized alien to perform work within the state of Missouri. Additional specific information is included herein.

<http://www.moga.mo.gov/statutes/C200-299/2850000530.HTM>

E-Verify is an example of a federal work authorization program. For vendors that are not already enrolled and participating in a federal work authorization program, E-Verify is available at:

[http://www.dhs.gov/xprevprot/programs/gc\\_1185221678150.shtm](http://www.dhs.gov/xprevprot/programs/gc_1185221678150.shtm)

## **SPECIAL NOTE:**

### **"EXCESSIVE UNEMPLOYMENT IS IN EFFECT"**

Only Missouri laborers and laborers from nonrestrictive states are allowed by law to be employed on Missouri's public works projects when the unemployment rate exceeds 5 percent for two consecutive months. (See Sections 290.550 through 290.580 RSMo).

*Restrictive states are as follows: Alaska, Arizona, California, Colorado, Connecticut, Delaware, District of Columbia, Florida, Idaho, Illinois, Iowa, Maine, Massachusetts, Mississippi, Montana, Nevada, New Jersey, North Dakota, Oklahoma, South Dakota, and the U.S. Virgin Islands, West Virginia and Wyoming.*

## **2. SCOPE OF WORK**

### **2.1 General Requirements:**

- 2.1.1 The contractor shall provide Structured Telecommunications Cabling on an as needed, if needed basis for the Missouri Highway and Transportation Commission (MHTC) and Missouri Department of Transportation (MoDOT), in accordance with the provisions and requirements stated herein.
- 2.1.2 The contractor shall provide all deliverables/services to the sole satisfaction of MoDOT.
- 2.1.3 MoDOT estimates, but does not guarantee, that the estimated quantities specified herein may be required/purchased.
- 2.1.4 MoDOT reserves the right to obtain "like or similar" products as specified herein from other manufacturers, exclusive of the contract, when use of such products is deemed in the best interest of MoDOT.
- 2.1.5 Unless otherwise specified herein, the contractor shall furnish all material, labor, facilities, equipment, and supplies necessary to provide the deliverables/services required herein.
- 2.1.6 Bid pricing shall include any applicable freight charges and/or shipping costs associated with equipment/materials being shipped from suppliers to either the contractor's facilities or MoDOT facilities. No additional charges for freight will be accepted by MoDOT.
- 2.1.7 Contractor will be responsible for moving and returning existing furniture, file cabinets, desks, etc. to complete work as specified.

### **2.2 Specific Requirements:**

- 2.2.1 The contractor shall provide MoDOT with a Structured Telecommunications Cabling System, in accordance with the following.

## **1. INTRODUCTION**

### **00 01 01: GENERAL BACKGROUND**

- This document is issued as a request for bid for the supply and installation of a structured telecommunications cabling system for Missouri Department of Transportation, District 8, Office and Garage.
- The structured cabling system will support voice, data, and imaging applications within the facilities located at 3025 E. Kearney, Springfield, Missouri 65803.
- This document describes the system requirements to be met in the bid of the telecommunications cabling vendors to secure under contract all materials, design, engineering, installation, supervision and training services for the structured cabling system.

### **00 11 00: BID REQUIREMENTS**

- This is an invitation to submit a bid based on the materials, systems and equipment described in this document.
- All bids must be submitted in accordance with the specifications and information contained herein, as well as with any addenda, if required, issued by the purchaser.
- The bid package shall be accompanied by a presale warranty commitment binding the awarded contractor and manufacturer to the customer selected, extended warranty package not less than 20 years in length.
- It is the intent of the Drawings and Specifications to provide a complete workable telecommunication cabling system ready for MoDOT's use. Any item not specifically shown on the Drawings or called for in the Specification, but normally required for a complete system, are to be considered a part of the contract.
- The Manufacturers and Products specified in the document are to be used. No substitutions of components specifically referenced will be allowed, without prior written customer consent after submittal review.

### **00 21 13: INSTRUCTIONS TO THE BIDDER**

- The Bidder shall consider the nature and amount of work to be done as well as the difficulties involved in its proper execution.
- No bid will be accepted by any contractor who did not attend the scheduled mandatory site survey.
- The bid shall include all costs deemed necessary to cover all contingencies essential to the installation of the specified system.
- All products and materials shall be new, unused, clean, free of defects and free of damage and corrosion.
- Where discrepancies are found during the bid process, the most stringent requirements must be included in the bid.
- No additional compensation will be allowed for extra work incurred on the part of the Contractor due to the bidder's failure to notice any existing condition, which may cause the additional labor.
- Bid responses shall be concise following the format and numbering of this specification. Items not requiring responses shall be acknowledged by the bidder as being understood.
- Bidders must notify the Purchaser as soon as detected any omissions or errors in the specification so corrective addenda may be issued. Such notification must be received by the Purchaser, at least (10) days prior to the date for receipt of bids.

#### **Interpretation**

No oral interpretations will be made to any bidder as to the meaning of the plans and specification for the acceptability of alternate products, materials, form or type of construction.

Every request for interpretation shall be made in writing and submitted with all supporting documents by April 28, 2010 at 1:00 pm local time. The request shall be sent directly to the RFB Coordinator. Every interpretation made to a bidder will be in the form of an addendum and will be available to the public on the MoDOT website along with the original bid documents. All such addenda shall become part of the contract documents.

## **01 32 00: SCHEDULE OF EVENTS**

The schedule below indicates the critical dates that must be satisfied by the Contractor. The Contractor must staff its work crews appropriately to meet the required dates of completion.

<b><u>EVENT</u></b>	<b><u>DATE</u></b>
Release of RFB	April 8, 2010
Site Surveys	April 19 thru April 22, 2010
Request for Interpretation due	April 28, 2010 1:00 p.m. local time
RFI Addendum Posted	May 7, 2010
Bid Due	May 13, 2010 1:00 p.m. local time
Start of Installation	15 Days after Notice to Proceed
Completion of Installation	100 Days after Start of Installation

Following contract execution, a "Notice to Proceed" shall be issued prior to the contractor beginning work. Contractor will begin work within 15 calendar days of the Notice to Proceed. Once work has started the contractor shall complete the work within one-hundred (100) calendar days minus holidays. The contractor shall notify the project contact in writing or by e-mail one week prior to beginning work. No work will be performed on **holidays** unless specifically authorized by the project contact. Should the contract, or in case of default, the surety fail to complete the work by the completion date specified, a deduction of the amount shown below will be made for each day the contract remains uncompleted.

### **Liquidated Damages per Day: \$250**

The following days shall be construed as **official holidays** under the terms of the contract:

January 1	New Year's Day
Third Monday in January	Martin Luther King, Jr.'s Birthday
February 12	Lincoln's Birthday
Third Monday in February	Washington's Birthday
May 8	Truman's Birthday
Last Monday in May	Memorial Day
July 4	Independence Day
First Monday in September	Labor Day
Second Monday in October	Columbus Day
November 11	Veteran's Day
Fourth Thursday in November	Thanksgiving Day
December 25	Christmas Day

**Work Hour Restrictions.**

The contractor shall be required to coordinate work schedules with MoDOT's designated representative. Typical work hours are Monday thru Friday, 7:30 am to 4:00 p.m. C.S.T.

Any work that does not interfere with the operation of the department may be done from 7:30 AM - 4:00 PM work days.

Any work that interferes with the operation of the Department is to be done at night or on weekends. MoDOT reserves the right to restrict contractor from working in sensitive areas and may require night or weekend work as conditions may warrant.

The contractor needs to provide a minimum of one week notice for any work to be performed on weekends.

**2. GENERAL REQUIREMENTS****01 43 23: CONTRACTOR QUALIFICATIONS**

- The Contractor shall at a minimum possess the following qualifications:
- Be in business a minimum of five (5) years.
- Contractor shall demonstrate satisfaction of sound financial condition and can be adequately bonded and insured if the project deems necessary.
- Possess those licenses/permits required to perform telecommunications installations in the specified jurisdiction.
- Personal knowledgeable in local, state, province and national codes and regulations. All work shall comply with the latest revision of the codes or regulations. When conflict exists between local or national codes or regulations, the most stringent codes or regulations shall be followed.
- Contractor must be registered with BICSI and have at least one RCDD on staff.
- Must have personnel fluent in the use of Computer Aided Design and possess and operate CAD software using .DWG or .DXF format.

**01 43 23: REQUIRED CONTRACTOR TRAINING**

- The Contractor shall be fully conversant and capable in the cabling of low voltage applications such as, but not limited to data, voice and imaging network systems. The Contractor shall at a minimum possess the following qualifications:
- Personnel trained and certified in the design of the Siemon Cabling System®.
- Personnel trained and certified to install the Siemon Cabling System®.
- The Designer and Installer shall show proof of current certification of the Siemon Cabling System® via an updated certificate given after attending the CI-301 training course or an on-line re-certification class given every two years.
- Provide references of the type of installation provided in this specification.
- Personnel trained and certified in fiber optic cabling, splicing, termination and testing techniques.
- Personnel must have experience using an optical light source and power meter plus OTDR.
- Personnel trained in the installation of pathways and support for housing horizontal and backbone cabling.

**01 71 00: CONTRACTOR RESPONSIBILITY**

- Contractor shall be obligated to exercise the highest standard of care in performing its obligations as defined in this request for bid.

- Contractor acknowledges that MoDOT will rely on contractor's expertise, ability and knowledge of the system being proposed and shall be obligated to exercise the highest of standard care in performing its obligation as defined in the following Scope of Work.
- Contractor will be responsible for moving and returning existing furniture, file cabinets, desks, etc. to complete work as specified.

### **01 43 13: MANUFACTURER QUALITY & PRODUCT SUBSTITUTIONS**

- All telecommunications connecting hardware and cable must be made by an ISO 9001:2000 Certified Manufacturer.
- All products must meet the technical requirements listed in sections 6-8. Any products not meeting these requirements will not be considered as this is the preferred and approved standard.

## **3. INDUSTRY REQUIREMENTS**

### **01 42 19: STANDARDS**

The following installation, documentation, component and system industry specifications shall be met or exceeded:

- ANSI/TIA-568-C.0 and addenda  
*"Generic Telecommunications cabling for Customer Premises"*
- ANSI/TIA-568-C.1 and addenda  
*"Commercial Building Telecommunications Cabling Standard"*
- ANSI/TIA-568-C.2 and addenda  
*"Balanced Twisted-Pair Telecommunications Cabling & Component Standard"*
- ANSI/TIA-568-C.3 and addenda  
*"Fiber Optic Cabling Components Standard"*
- ANSI/TIA-569-B and addenda  
*"Commercial Building Standard for Telecommunications Pathways and Spaces"*
- ANSI/TIA-606-A and addenda  
*"Administration Standard for the Telecommunications Infrastructure of Commercial Buildings"*
- ANSI-J-STD-607-A and addenda  
*"Commercial Building Grounding and Bonding Requirements for Telecommunications"*
- ANSI/TIA-526-7  
*"Measurement of Optical Power Loss of Installed Single-Mode Fiber Cable Plant"*
- ANSI/TIA-526-14A  
*"Optical Power Loss Measurements of Installed Multimode Fiber Cable Plant"*
- IEC/TR 61000-5-2 - Ed. 1.0 and amendments  
*"Electromagnetic compatibility (EMC) - Part 5: Installation and mitigation guidelines - Section 2: Earthing and cabling"*
- ISO/IEC 11801 Ed2.0 and amendments  
*"Information technology - Generic cabling for customer premises"*
- CENELEC EN 50173:2000 and amendments  
*"Information Technology - Generic cabling systems"*

## **4. SCOPE OF WORK**

### **01 11 00: SCOPE OF WORK**

- Full Main Level and Partial Basement Level of Main Building. Garage Building upper and lower floor.
- Contractors to provide VISIO layout of Rack and Cabinet Configurations for MDF/IDF locations per Design/Build and Mandatory Site Visit.
- Provide new Wiremold primarily Chocolate Brown for Surface Mount or non-determined conduit and pathways and replace any Wiremold not adhering in existing work areas.
- Provide additional Wiremold to separate electrical pathways shared currently by existing Type II and Type I.
- Provide Gigabit Backbone between Main Level Small Plans Room and Basement IS Area with armor clad fiber or provide in an innerduct pathway.
- Utilize existing fiber connectivity in place between Main Bldg. and Garage.
- Provide detailed ability and scope to install new infrastructure parallel to existing solution without downtime at time of bid.
- Coordinate with District 8, IS Staff, for cut over timeline and schedule as provided by contractor.
- Maintaining near 100% network/telephone connectivity during phased installation and cut over of project.
- Complete removal and disposal of existing Type II, Type I, Cat 5 cabling, jacks, faceplates, surface mount boxes, etc. as Network Cabling is being replaced. Contractor to retain/dispose of any old used cabling at contractor's expense.
- Installation of RS-07-S Rack System in Basement Information Systems Area, and VersaPOD Cabinet System in Main Building Small Plans Room.
- Installation and relocation of TR equipment to Procurement Supervisor closet and provide solution to accommodate equipment and infrastructure.
- Provide J-Hooks pathway types and configurations at contractor's discretion.
- Provide and install new 2x 100pair voice feeder cable between Telco DMARC in basement and VersaPOD Cabinet in Main Level Small Plans Room.
- Provide and install new 25 pair telephone feeder between Telco DMARC in basement and rack system in basement Information Systems area
- Provide and install any additional grounding per NEC Codes and requirements.
- Provide and install 25pair telephone feeder in Garage Building from "phone panel" to wiring closet on first floor and 25pair telephone feeder from phone panel to MCS Supervisor wall mount location.
- Installation of 175 (White) Voice/(Blue) Data "considered single location", on main floor/Main Building.
- Installation of 10 WAP (Yellow) locations on main floor/Main Building.
- Installation of 53 (White) Voice/(Blue) Data "single locations" on basement level/Main Building.
- Installation of 3 WAP (Yellow) locations on basement level/Main Building
- Installation of 30 (White) Voice/(Blue) Data "single locations" on main level/Garage Building.
- Installation of 6 WAP (Yellow) locations on main level/Garage Building
- Installation of 14 (White) Voice/(Blue) Data "single locations" on upper level/Garage Building
- Installation of 1 WAP (Yellow) location on upper level/Garage Building
- Provide pricing for optional Voice/Data or WAP locations.
- Provide and install wall mount swing rack for lower level/Garage closet TR



## **5. HORIZONTAL CABLING - COPPER**

**In addition to meeting the category 6 specifications outlined in ANSI/TIA/EIA-568-B.2-1, the requirements in this section must also be met for all applicable balanced twisted-pair products as listed below.**

### **27 15 43: OUTLETS**

All category 6 information outlets designed for termination of 4-pair balanced twisted-pair category 6 copper cable must possess the following characteristics at the minimum:

Siemon ZMAX Outlet Part Number Z6-09, Orange, DATA  
Siemon ZMAX Outlet Part Number Z6-02, White, VOICE  
Siemon ZMAX Outlet Part Number Z6-05, Yellow, WAP

### **27 15 43: FACEPLATES**

All faceplates installed, as part of this specification shall have these minimum features listed below:

Siemon MX Series Faceplates, White MX-FP-S02-02  
Siemon MX Series Faceplates, White MX-FP-S04-02  
Siemon MX-SM Series Surface Mount boxes

### **27 16 19: PATCH CORDS**

**All Category 6 modular equipment cords shall conform to the following minimum performance standards:**

**Siemon MC 6 UTP Series Modular Patch Cords**  
**MC6-8-T-(XX)-06, Blue, Network**  
**MC6-8-T-(XX)-05, Yellow, Access Points or WAP**  
**(XX) = Length**

### **27 15 13: CABLE**

All Category 6 cable shall conform to the following minimum performance standards:

*Siemon System 6 Copper Cable, UTP*  
*Siemon 9C6P4-E3-06-RXA, Data (Blue)*  
*Siemon 9C6P4-E3-02-RXA, Voice (White)*  
*Siemon 9C6P4-E3-05-RXA, WAP (Yellow)*

## **6. HORIZONTAL CABLING - FIBER**

**In addition to meeting the specifications outlined in ANSI/TIA/EIA-568-B.3 and ISO/IEC 11801:2000 Ed2.0, the requirements in this section must also be met for all applicable optical fiber products as listed below.**

### **27 15 43: OUTLETS/ADAPTERS**

All optical fiber outlets/adapters shall meet the following characteristics:

*Siemon Fiber Connect Adaptor Panel RIC-F-LC12-01*

## **27 15 43: CONNECTORS**

All optical fiber connectors shall meet the following characteristics:

*Siemon XLR8 Pre Polished Connectors*

*62.5, MM, Connectors*

*Siemon FC1M-LC-6MM-B80*

*Or*

*Siemon Epoxy Polish Connectors*

*Siemon FC1-LC--MM-B80*

## **7. BACKBONE CABLING**

### **27 15 23: CABLE**

**In addition to meeting the applicable performance specifications, all optical fiber cable shall be appropriate for the environment in which it is installed.**

#### **MULTIMODE OPTICAL FIBER CABLE**

All horizontal multimode optical fiber cable must be a minimum of two strands of 62.5/125 or 50/125µm multimode.

*Siemon Light System Gigabit Ethernet Fiber*

*12 Strand, MM, Orange Jacket, 62.5 Fiber*

*Siemon 9BB6P012G-G109A*

*OR*

*9BC6P012G-G109A Aluminum Interlocking Armored Fiber*

### **27 13 00: BACKBONE CABLING**

Cables allowed for use in the backbone include: 4-pair 100Ω balanced twisted-pair copper, multi-pair 100Ω balanced twisted-pair copper, hybrid or bundled 100Ω balanced twisted-pair copper, 50/125µm or 62.5/125µm multimode optical fiber, and singlemode optical fiber cables. The cable shall support voice, data and imaging applications. The bending radius and pulling strength requirements of all backbone cables shall be observed during handling and installation.

### **27 13 00: INTRABUILDING CABLING**

The cable route within a building, connecting closet to closet or closet to the equipment room is referred to as the Intrabuilding Backbone Subsystem. It links the Main Cross-connect (MC) in the equipment room to Intermediate Cross-connects (IC) and Horizontal Cross-connects (HC) in the Telecommunications Rooms (TR). It consists of the backbone transmission media between these locations and the associated connecting hardware terminating this media.

### **27 13 00: INTERBUILDING CABLING**

When a distribution system encompasses more than one building, the components that provide the link between buildings constitute the Interbuilding Backbone Subsystem. This subsystem includes the backbone transmission media, associated connecting hardware terminating this media, and electrical protection devices to mitigate harmful voltages when the media is exposed to lightning and/or high voltage power surges that pass through the building cable. It is normally a first-level backbone cable beginning at the main cross-connect in the equipment

room of the hub building and extending to the intermediate cross-connect in the equipment room of a satellite building.

## **8. EQUIPMENT ROOM**

### **27 11 19: PATCH PANELS**

All termination panels shall facilitate cross-connection and inter-connection using modular patch cords and shall conform to EIA standard, 19-inch relay rack mounting requirements.

*Siemon High Density ZMAX Series Patch Panels*

*Siemon Z6-PNL-U48K, 48port, 1U, black, w/outlets*

*Siemon Z6-PNL-U48, 48 port, 1U, black, with out outlets*

*Siemon Z6-P, ZMAX 6 UTP panel outlet*

*Siemon Z6-PNL-24K, 24 port, 1U, black, w/outlets*

*Siemon Z6-PNL-24, 24 port, 1U, black, with out outlets*

### **27 11 19: CONNECTING BLOCKS**

The connecting block shall facilitate cross-connection and/or inter-connection using patch cords.

*RJ11, Rack Mount for 200 pair feeder*

*Siemon 66 blocks*

*Siemon 210 blocks*

### **27 11 16: FIBER ENCLOSURES**

**All interconnect centers, panels and trays (units) shall provide cross-connect, inter-connect, splicing capabilities and contain cable management for supporting and routing the fiber cables/jumpers.**

**Siemon Fiber Connect Panel (FCP3 Series)**

**FCP3-DWR**

**Or**

**FCP3-RACK**

### **27 11 16: RACKS**

For rack-mounted installations in a telecommunications room the installer shall use a 19 or 23-inch equipment rack.

Siemon RS Rack System

Siemon RS-07-S

Note\* See Vertical Management Below

RS Series Horizontal Cable Management 2RMS; RS3-RWM-2DS

VersaPOD Horizontal Cable Management 2RMS; RS3-RWM-2

### **27 11 16: CABINET**

For cabinet enclosure installations in a telecommunications room or data center the installer shall have these minimum features listed below:

Siemon VersaPOD Single Cabinet Configuration

### **27 11 16: VERTICAL PATCH PANELS (VPP)**

When the cabinets are deployed the vertical patch panel (Zero-U) solution shall have these minimum features:

Siemon End-of-Row Vertical Panels  
Siemon Zero-U Sliding Vertical Patch Panels

### **27 11 16: VERTICAL PATCH CHANNELS (VPC)**

When the cabinets are deployed the vertical patch channel solution shall have these minimum features:

Siemon Vertical Patching VPC-12 for RS Series Racks  
Siemon Vertical Cable Management for VersaPOD Series

### **27 11 16: CABINET ACCESSORIES**

When the cabinets are deployed there are many accessory items available. Use this section to select and insert those accessories required.

*Siemon VP-GRD Grounding Kit*  
*Siemon RS-P04 Power Strip*  
*Siemon VP-FAN Top-Mount Cooling Fan Panel*  
*Siemon VP-BRUSH Brush Guard*  
*Siemon VP-W Castors, Set of Four*

## **9. SYSTEM DESIGN REQUIREMENTS**

### **27 15 00: HORIZONTAL CABLING**

The Horizontal Subsystem is the portion of the telecommunications cabling system that extends from the work area telecommunications outlet/connector to the horizontal cross-connect in the telecommunications room. It consists of the telecommunications outlet/connector, the horizontal cables, optional consolidation point, and that portion of the cross-connect in the telecommunications room serving the horizontal cable. Each floor of a building should be served by its own Horizontal Subsystem.

### **27 11 00: TELECOMMUNICATIONS ROOM**

- The Telecommunications Room is generally considered to be a floor serving facility. The Horizontal Cross-connect links the Horizontal Subsystem and the Backbone Subsystem together.
- The Horizontal Cross-connect shall consist of rack or wall mounted wiring blocks or panels for termination of copper cables or rack or wall mount interconnect centers or fiber management panels/trays for the termination of optical fibers.
- Cross-connect spaces include the labeling of hardware for providing circuit identification and patch cords or cross-connect wire used for creating circuit connections at the cross-connect.
- The telecommunications room shall be equipped to contain telecommunications equipment, cable terminations, and associated cross-connects.
- Separation from sources of EMI shall be in accordance with ANSI/TIA/EIA-569-B and local codes.
- Communication grounding / earthing and bonding shall be in accordance with applicable codes and regulations. It is recommended that the requirements of

IEC/TR3 61000-5-2 - Ed. 1.0, ANSI-J-STD-607-A, or both be observed throughout the entire cabling system.

#### **27 11 00: EQUIPMENT ROOM**

- The Equipment Subsystem consists of shared (common) electronic communications equipment in the equipment room or telecommunications room and the transmission media required to terminate this equipment on distribution hardware.
- The equipment room shall be equipped to contain telecommunications equipment, cable terminations, and associated cross-connects.
- Separation from sources of EMI shall be as specified in the Telecommunication Room section of this specification.
- Communication grounding / earthing and bonding shall be in accordance with applicable codes and regulations. It is recommended that the requirements of IEC/TR3 61000-5-2 - Ed. 1.0, ANSI-J-STD-607-A, or both be observed throughout the entire cabling system.

### **10. INSTALLATION**

#### **02 22 00: SITE SURVEY**

Prior to placing any cable pathways or cable, the contractor shall survey the site to determine job conditions will not impose any obstructions that would interfere with the safe and satisfactory placement of the cables. The arrangements to remove any obstructions with the Project Manager need to be determined at that time.

#### **27 05 28.29: CABLE PATHWAYS**

- Pathways shall be designed and installed to meet applicable local and national building and electrical codes or regulations.
- **Wiremold will be required to color match building structure to provide communications pathways separate from electrical.**
- **Wiremold will need to be replaced when adhesive is no longer on existing applications.**
- Grounding / Earthing and bonding of pathways shall comply with applicable codes and regulations.
- Pathways shall not have exposed sharp edges that may come into contact with telecommunications cables.
- The number of cables placed in a pathway shall not exceed manufacture specifications, nor, will the geometric shape of a cable be affected.
- Pathways shall not be located in elevator shafts. (I believe we can remove this one as we do not have any elevators.)
- 

#### **27 05 28.33: INTRABUILDING CABLE ROUTING**

- The backbone subsystem shall include cable installed in a vertical manner between floor telecommunications rooms and the main or intermediate cross-connect in a multi-story building and cable installed horizontally between

telecommunications rooms and the main or intermediate cross-connect in a long single story building like a school or factory.

- Unless otherwise recommended by the manufacturer, all fiber cables will be run in innerduct or be armor cladded fiber.
- Fibers will be terminated in the telecommunications rooms using SC, ST, MT-RJ, or LC connectors in wall mounted interconnect centers or rack mounted panels equipped with sufficient ports, slack storage space and splice trays if required to terminate and secure all fibers.
- Adequate riser sleeve/slot space shall be available with the ability to ingress the area at a later date in all telecommunications rooms, such that no drilling of additional sleeves/slots is necessary.
- The backbone cables shall be installed in a star topology, emanating from the main cross-connect to each telecommunications room. An intermediate cross-connect may be present between the main cross-connect and the horizontal cross-connect. This is known as a hierarchical star topology.
- At least one 4-pair balanced twisted-pair, hybrid/bundled or multi-pair cable should be run for each Intrabuilding backbone segment.
- Optical fiber should be run for any backbone segment greater than 90 m (295 ft.). If the Intrabuilding backbone segment is less than 90 m (295 ft), and fiber is not routed, the balanced twisted-pair cable shall be category 5e or higher.
- Backbone pathways shall be installed or selected such that the minimum bend radius of backbone cables is kept within manufacturer specifications both during and after installation.

#### **27 05 43/46: INTERBUILDING CABLE ROUTING**

- The backbone subsystem shall include cable installed between buildings via underground, tunnel, direct -buried, aerial or any combination of these from the main cross-connect to an intermediate cross-connect in a multi-building campus.
- Unless otherwise recommended by the manufacturer, all fiber cables will be run in innerduct.
- Fibers will be terminated in the telecommunications rooms using SC, ST, MT-RJ or LC connectors in wall mounted interconnect centers or rack mounted panels equipped with sufficient ports, slack storage space and splice trays if required to terminate and secure all fibers.
- In an underground system, adequate underground conduit space shall be available and accessible at each building. The conduits shall not exceed a fill factor of 40%.
- All underground systems shall be designed to prevent water runoff from entering the building.
- The backbone cables shall be installed in a star topology, emanating from the main cross-connect to each satellite building telecommunications room. All Interbuilding cables shall be installed to the applicable codes and regulations.
- Optical fiber shall be run for all Interbuilding backbone segments, and as a recommendation, at least one balanced twisted-pair cable should be run for each Interbuilding backbone segment.

- Backbone pathways shall be installed or selected such that the minimum bend radius and pulling tension of backbone cables is kept within cable manufacturer specifications both during and after installation.

## **27 15 00: HORIZONTAL CABLE ROUTING**

- All horizontal cables, regardless of media type, shall not exceed 90 m (295 ft) from the telecommunications outlets in the work area to the horizontal cross connect.
- The combined length of jumpers, or patch cords and equipment cables in the telecommunications room and the work area should not exceed 10m (33 ft) unless used in conjunction with a multi-user telecommunications outlet.
- Two horizontal cables shall be routed to each work area. At least one horizontal cable connected to an information outlet shall be 4-pair, 100  $\Omega$  balanced twisted-pair.
- It is recommended that a minimum horizontal cable distance of 15m (49 ft.) shall be maintained between the telecommunications room and the work area.
- For installations with consolidation points, a minimum horizontal cable distance of 15m (49 ft.) shall be maintained between the telecommunications room and consolidation point, and 5m (16 ft.) between the consolidation point and the work area.
- Horizontal pathways shall be installed or selected such that the minimum bend radius of horizontal cables is kept within manufacturer specifications both during and after installation.
- In open ceiling cabling, cable supports shall be provided by means that is structurally independent of the suspended ceiling, its framework, or supports. These supports shall be spaced no more than 1.5 m (5 ft) apart.
- **UTP ONLY:** Telecommunications pathways, spaces and metallic cables, which run parallel with electric power or lighting, which is less than 3kVA, shall be installed with a minimum clearance of 50 mm (2 in).
- **UTP ONLY:** Telecommunications pathways, spaces and metallic cables, which run parallel with electric power or lighting, which is more than 3kVA but less than 6kVA, shall be installed with a minimum clearance of 1.5 m (5 ft).
- **UTP ONLY:** Telecommunications pathways, spaces and metallic cables, which run parallel with electric power or lighting, which is more than 6kVA, shall be installed with a minimum clearance of 3 m (10 ft).
- **F/UTP (ScTP) ONLY:** Telecommunications pathways, spaces and metallic cables, which run parallel with electric power or lighting, which is less than 3kVA, shall be installed with a minimum clearance of 0 m (0 ft).
- **F/UTP (ScTP) ONLY:** Telecommunications pathways, spaces and metallic cables, which run parallel with electric power or lighting, which is more than 3kVA but less than 6kVA, shall be installed with a minimum clearance of 0.6 m (2 ft).
- **F/UTP (ScTP) ONLY:** Telecommunications pathways, spaces and metallic cables, which run parallel with electric power or lighting, which is more than 6kVA, shall be installed with a minimum clearance of 1 m (3 ft).

- For voice or data applications, 4-pair balanced twisted-pair or fiber optic cables shall be run using a star topology from the telecommunications room serving that floor to every individual information outlet. The customer prior to installation of the cabling shall approve all cable routes.
- The Contractor shall observe the bending radius and pulling strength requirements of the 4-pair balanced twisted-pair and fiber optic cable during handling and installation.
- Each run of balanced twisted-pair cable between horizontal portion of the cross-connect in the telecommunication closet and the information outlet shall not contain splices.
- In a false ceiling environment, a minimum of 75 mm (3 in) shall be observed between the cable supports and the false ceiling.
- Continuous conduit runs installed by the contractor should not exceed 30.5 m (100 ft) or contain more than two (2) 90 degree bends without utilizing appropriately sized pull boxes.
- All horizontal pathways shall be designed, installed and grounded to meet applicable local and national building and electrical codes.
- The number of horizontal cables placed in a cable support or pathway shall be limited to a number of cables that will not cause a geometric shape of the cables.
- Maximum conduit pathway capacity shall not exceed a 40% fill. However, perimeter and furniture fill is limited to 60% fill for move and changes.
- Horizontal distribution cables shall not be exposed in the work area or other locations with public access.

#### **27 15 43: WORK AREA TERMINATION**

- All balanced twisted-pair cables wired to the telecommunications outlet/connector, shall have 4-pairs terminated in eight-position modular outlets in the work area. All pairs shall be terminated.
- The telecommunications outlet/connector shall be securely mounted at planned locations.
- The height of the telecommunications faceplates shall be to applicable codes and regulations.

#### **PULLING TENSION**

- The maximum cable pulling tensions shall not exceed manufacturer's specifications.

#### **BEND RADIUS**

- The maximum cable bend radii shall not exceed manufacturer's specifications.
- In spaces with balanced twisted-pair cable terminations, the maximum bend radius for 4-pair cable shall not exceed four times the outside diameter of the cable and ten times for multi-pair cable. This shall be done unless this violates manufacturer specifications.



- During the actual installation, bend radius on 4-pair cable shall not exceed eight times the outside diameter of the cable and ten times for multi-pair cable. This shall be done unless this violates manufacturer specifications.

#### **SLACK**

- In the work area, a minimum of 300 mm (12 in) should be left for balanced twisted-pair cables, while 1 m (3 ft) be left for fiber cables.
- In telecommunications rooms a minimum of 3m (10 ft) of slack should be left for all cable types. This slack must be neatly managed on trays or other support types.

#### **27 11 23: Cable Tie Wraps**

- Tie wraps shall be used at appropriate intervals to secure cable and to provide strain relief at termination points. These wraps shall not be over tightened to the point of deforming or crimping the cable sheath.
- Hook and loop cable managers should be used in the closet where reconfiguration of cables and terminations may be frequent.

Siemon Company VCM Series Recommended

#### **27 05 26: GROUNDING**

- All grounding / earthing and bonding shall be done to applicable codes and regulations.

#### **07 84 00: FIRE PROTECTION**

- Properly installed firestop systems shall be installed to prevent or retard the spread of fire, smoke, water, and gases through the building. This requirement applies to openings designed for telecommunications use that may or may not be penetrated by cables, wires, or raceways.
- Fire stops shall be done to applicable code.

#### **01 71 00: WORKMANSHIP**

- All work shall be done in a workman like fashion of the highest standards in the telecommunications industry.
- All equipment and materials are to be installed in a neat and secure manner, while cables are to be properly dressed.
- Workers must clean any debris and trash at the close of each workday.

### **11. TESTING**

**Testing of all newly installed cable channels shall be performed prior to system cutover.**

#### **01 33 19: COPPER TESTING**

- All category 6 field-testing shall be performed with an approved level III balanced twisted-pair field test device.

- All installed category 6 channels shall perform equal to or better than the minimum requirements as specified by the table below:

Parameter	Performance @ 100MHz	Performance @ 200MHz	Performance @ 250MHz
<b>Insertion Loss</b>	19.59 dB	29.01 dB	33.07 dB
<b>NEXT Loss</b>	46.9 dB	41.8 dB	40.1 dB
<b>PS NEXT Loss</b>	45.6 dB	40.4 dB	38.7 dB
<b>ACR-N</b>	27.3 dB	12.8 dB	7.0 dB
<b>PS ACR-N</b>	26.0 dB	11.3 dB	5.6 dB
<b>ACR-F</b>	31.3 dB	25.2 dB	23.3 dB
<b>PS ACR-F</b>	30.3 dB	24.2 dB	22.3 dB
<b>Return Loss</b>	14.0 dB	11.0 dB	10.0 dB
<b>Propagation Delay</b>	548 ns	547 ns	546 ns
<b>Delay Skew</b>	45 ns	45 ns	45 ns

- All balanced twisted-pair backbone cables exceeding 90 m (295 ft) or 100 m (328 ft) shall be 100% tested for continuity if applications assurance is not required.
- Category 6 balanced twisted-pair horizontal and backbone cables, whose length does not exceed 90 m (295 ft) for the permanent link, and 100 m (328 ft) for the channel shall be 100 percent tested according to ANSI/TIA/EIA-568-B.1. Test parameters include wire map plus ScTP shield continuity (when present), length, NEXT loss (pair-to-pair), NEXT loss (power sum), ELFEXT loss (pair-to-pair), ELFEXT loss (power sum), return loss, insertion loss, propagation delay, and delay skew.

#### **TEST EQUIPMENT CRITERIA**

- All balanced twisted-pair field testers shall be factory calibrated each calendar year by the field test equipment manufacturer as stipulated by the manuals provided with the field test unit. The calibration certificate shall be provided for review prior to the start of testing.
- Autotest settings provided in the field tester for testing the installed cabling shall be set to the default parameters
- Test settings selected from options provided in the field testers shall be compatible with the installed cable under test.

### **01 33 19: FIBER OPTIC TESTING**

#### **BACKBONE FIBER TESTING**

- Fiber horizontal cables shall be 100% tested for insertion loss and length.
- Insertion loss shall be tested at 850 nm and 1300 nm for 50/125µm and 62.5/125µm multimode cabling in at least one direction using the Method B (1-jumper) test procedure as specified in ANSI/TIA/EIA-526-14A.

- Insertion loss shall be tested at 1310 and 1550 for singlemode cabling in at least one direction using the Method A.1 (1-jumper) test procedure as specified in ANSI/TIA/EIA-526-7.
- Length shall be tested using an OTDR, optical length test measurement device or sequential cable measurement markings.
- The backbone link performance guarantees are as follows:

<b>Backbone Link Performance</b>		
<b>Parameter</b>	<b>62.5/125μm (850nm/1300nm)</b>	<b>50/125μm (850nm/1300nm)</b>
Max. Attenuation (dB)	8.5/3.5	8.5/3.5
Bandwidth (MHz•km) <sup>1</sup>	200/500	500/500
Guaranteed Transmission Distance (m) <sup>2</sup>	275/550	550/550
Min. Return Loss (dB) <sup>3</sup>	20	20

<sup>1</sup> Bandwidth is an important performance parameter, but because it is intrinsic to the fiber and cannot be adversely affected by installation practices, it does not require testing in the field.

<sup>2</sup> The protocol pertinent to the transmission distances as noted is Gigabit Ethernet per IEEE 802.3z.

<sup>3</sup> If the insertion loss is within the limits as noted in the above chart, it is indicative that the Return Loss performance of the link will be within the limits as indicated.

Acceptable attenuation test results shall be determined using the following calculation:

Link Attenuation = Cable Attenuation + Connector Attenuation + Splice Attenuation  
where:

Cable Attenuation (dB) = Attenuation Coefficient (dB/km) x length (km)

Attenuation Coefficient = 3.5 dB/km @ 850 nm

Attenuation Coefficient = 1.0 dB/km @ 1300 nm

Connector Attenuation (dB) = Number of Connector Pairs (n) x Connector Loss = n x 0.75 dB

Splice Attenuation (dB) = Number of Splices (s) x Splice Loss (dB) = s x 0.3 dB

## **12. ADMINISTRATION & DOCUMENTATION**

### **27 05 53: LABELING**

- Horizontal and backbone cables shall be labeled at each end. The cable or its label shall be marked with its identifier.
- A unique identifier shall be marked on each faceplate to identify it as connecting hardware.
- Each port in the faceplate shall be labeled with its identifier.
- A unique identifier shall be marked on each piece of connecting hardware to identify it as connecting hardware.
- Each port on the connecting hardware shall be labeled with its identifier.

### **01 33 23: DRAWINGS**

As-built drawings shall be supplied by the contractor showing the locations of and identifiers for all:

- Horizontal cable routing and terminations
- Telecommunications outlets/connectors

- Backbone cable routing and terminations

### 01 33 29: RECORDS AND REPORTS

All records shall be created by the installation contractor and turned over at the completion of work

The format shall be computer based and both soft copies and hard copies shall be part of the As-built package. The minimum requirements include:

- Cable records must contain the identifier, cable type, termination positions at both ends, splice information as well as any damaged pairs/conductors.
- Connecting hardware and connecting hardware position records must contain the identifier, type, damaged position numbers, and references to the cable identifier attached to it.
- Test documentation on all cable types shall be included as part of the As-built package.

All reports shall be generated from the computer-based program used to create the records above. These reports should include but not limited to:

- Cable Reports
- Cross-connect Reports
- Connecting Hardware Reports

## 13. WARRANTY

**Either a permanent link or channel model configuration may be applied to the horizontal and/or backbone sub-systems of the structured cabling system. Applications assurance is only applied to a channel model configuration. All channels are to be qualified for linear transmission performance up to 250 MHz to ensure that high-frequency voltage phase and magnitude contributions do not prove cumulative or adversely affect channel performance.**

### 01 33 13: SYSTEM WARRANTY

A twenty (20) year warranty available for the Structured Telecommunications Cabling System be provided for an end-to-end channel model installation which covers applications assurance, cable, connecting hardware and the labor cost for the repair or replacement thereof.

Additional features of the warranty shall include:

- Margin over category 6 channel specifications on all parameters across the entire frequency range of 1-250MHz as noted below:

Parameter	Guaranteed Margin 1-250MHz
Insertion Loss	4.3 – 8.1%
NEXT Loss	5.0 dB
PS NEXT Loss	7.0 dB
ACR	5.0 dB
PS ACR	7.0 dB
ACR-F	7.0 dB
PS ACR-F	9.0 dB
Return Loss	2.0 dB
Propagation	0 ns

<b>Delay</b>	
<b>Delay Skew</b>	5 ns

- Performance claims based on worst case testing and channel configurations

### **01 33 13: PRODUCT WARRANTY**

The manufacturer of passive telecommunications equipment used in a manner not associated with the Systems Warranty must have a minimum five (5) year Component Warranty on all its product. The Products Warranty covers the components against defects in material or workmanship under normal and proper use.

### **01 86 29: APPLICATIONS SUPPORTED**

Existing and future applications supported for a channel model warranty include those approved by the Institute of Electronic and Electrical Engineers (IEEE), the Asynchronous Transfer Mode (ATM) Forum, the American National Standards Institute (ANSI) or the International Organization of Standards (ISO) that specify compatibility with the cable referenced herein.

## **2.4 Liquidated Damage Requirements:**

2.4.1 The contractor shall agree and understand that providing the Structured Telecommunications Cabling System in accordance with the requirements stated herein is considered critical to the efficient operations of MoDOT. However, since the amount of actual damages would be difficult to establish in the event the contractor fails to comply with the contractual requirements, the contractor shall agree and understand that the amount identified below as liquidated damages shall be reasonable and fair under the circumstances.

- a. In the event the contractor fails to provide the Structured Telecommunications Cabling in accordance with the contractual requirements specified herein, the contractor shall be assessed liquidated damages in the amount of \$250.00 per day for each such delinquent day.
- b. The contractor shall further agree and understand that such liquidated damages shall either be deducted from the total amount due the contractor or paid by the contractor as a direct payment to MoDOT, at the sole discretion of MoDOT.
- c. The contractor shall agree and understand that the liquidated damages described herein shall not be construed as a penalty.
- d. The contractor shall agree and understand that all assessments of liquidated damages shall be within the discretion of the MoDOT and shall be in addition to, not in lieu of, the rights of the MoDOT to pursue other appropriate remedies.
- e. The contractor shall agree and understand that if the Structured Telecommunications Cabling System is rejected due to not meeting specifications, all cost associated with returning such Structured Telecommunications Cabling System to the contractor shall be paid by the contractor, at no additional cost to MoDOT.

## **2.5 Invoicing and Payment Requirements:**

2.5.1 The contractor shall submit an itemized invoice to the following address after the completion of deliverables, as specified herein.

Missouri Department of Transportation  
M.P.O. Box 868  
Springfield, MO 65801

- 2.5.2 Each invoice should be itemized in accordance with items listed on the purchase order and/or contract. The statewide financial management system has been designed to capture certain receipt and payment information. Therefore, each invoice submitted must reference the purchase order number and must be itemized in accordance with items listed on the purchase order. Failure to comply with this requirement may delay processing of invoices for payment.
- 2.5.3 The contractor shall be paid in accordance with the firm, fixed prices stated on the pricing page(s) of this document after completion of deliverables specified herein and acceptance by MoDOT.
- 2.5.4 Other than the payment specified above, no other payments or reimbursements shall be made to the contractor for any reason whatsoever.
- 2.5.5 MoDOT is exempt from paying Missouri Sales Tax, Missouri Use Tax and Federal Excise Tax. However, the contractor may themselves be responsible for the payment of taxes on materials they purchase to fulfill the contract. A Federal Excise Tax Exemption Certificate will be furnished to the successful bidder upon request.
- 2.5.6 Unless otherwise provided for in the solicitation documents, payment for all equipment, supplies, and/or services required herein shall be made in arrears. The Missouri Highways and Transportation Commission (MHTC) shall not make any advance deposits.
- 2.5.7 The MHTC assumes no obligation for equipment, supplies, and/or services shipped or provided in excess of the quantity ordered. Any authorized quantity is subject to the MHTC's rejection and shall be returned at the contractor's expense.
- 2.5.8 The MHTC reserves the right to purchase goods and services using the state-purchasing card.

## **2.6 Other Contractual Requirements:**

- 2.6.1 Escalation Clause - In the event the contractor requests a price increase during the contract period (original contract period or contract renewal period), the contractor must provide a written request and documentation justifying the need for a price increase, and the amount of such price increase. MoDOT will review the contractor's written request and documentation, and decide if a price increase is to be granted at that particular time. The contractor shall understand and agree that MoDOT's decision shall be final and without recourse.
  - a. No price increase shall be granted during the first 3 months of the original contract period, or if applicable, first 3 months of a contract period for a renewal.
  - b. In the event a price increase is granted due to an approved escalation, the renewal percentage shall be based upon the current contract value.
- 2.6.2 Contract Bond - In the event a price increase is granted due to an approved escalation, the contractor shall increase their 100% contract bond, as specified elsewhere herein, to reflect the current contract value.

- 2.6.3 Inspection Specifications - MoDOT reserves the right to inspect the material at the point of manufacture, intermediate storage point, or at a destination which shall be at the discretion of MoDOT.
- 2.6.4 RSMo 285.530 - The contractor understands and agrees that by entering into a contractual agreement with MoDOT, they certify the following:
- a. The contractor shall only utilize personnel authorized to work in the United States in accordance with applicable federal and state laws. This includes, but is not limited to, the Illegal Immigration Reform and Immigrant Responsibility Act (IIRIRA) and INA Section 274A.
  - b. If the contractor is found to be in violation of this requirement or the applicable state, federal and local laws and regulations, and if the State of Missouri has reasonable cause to believe that the contractor has knowingly employed individuals who are not eligible to work in the United States, the state shall have the right to cancel the contract immediately without penalty or recourse and suspend or debar the contractor from doing business with the state.
  - c. The contractor agrees to fully cooperate with any audit or investigation from federal, state or local law enforcement agencies.
  - d. In addition, the contractor shall maintain enrollment and participation in a federal work authorization program with respect to the employees working in connection with the contracted services included herein.

### **3. BID SUBMISSION**

#### **3.1 Bid Submission Information:**

- 3.1.1 All bids must be received in a sealed envelope clearly marked **“Structured Telecommunications Cabling System”**.
- 3.1.2 All bids must be received at the following address no later than May 13, 2010 at 1:00 p.m., CST.

The Missouri Department of Transportation  
Procurement Department  
Attn: Andy McNeill, CPPB  
3025 East Kearney Street  
Springfield, MO 65803

- 3.1.3 The bidder may withdraw, modify or correct his bid after it has been deposited with the Department provided such request is submitted in writing and received at the location designated for the bid opening prior to the time specified for opening bids. Such a request received as specified will be attached to the bid and the bid will be considered to have been modified accordingly. No bid may be modified after the time specified for the opening of bids.
- 3.1.4 Open Competition / Request For Bid Document:
- a. It shall be the bidder's responsibility to ask questions, request changes or clarification, or otherwise advise MoDOT if any language, specifications or requirements of an RFB appear to be ambiguous, contradictory, and/or arbitrary, or appear to inadvertently restrict or limit the requirements stated in the RFB to a single source. Any and all communication from bidders regarding specifications, requirements, competitive bid process, etc., must be directed to the buyer from MoDOT, unless the RFB specifically refers the bidder to another contact. Such communication should be received at least three (3) working days prior to the official bid opening date.

- b. Every attempt shall be made to ensure that the bidder receives an adequate and prompt response. However, in order to maintain a fair and equitable bid process, all bidders will be advised, via the issuance of an amendment to the RFB, of any relevant or pertinent information related to the procurement. Therefore, bidders are advised that unless specified elsewhere in the RFB, any questions received less than three (3) working days prior to the RFB opening date may not be answered.
- c. Bidders are cautioned that the only official position of the MoDOT is that which is issued by MoDOT in the RFB or an amendment thereto. No other means of communication, whether oral or written, shall be construed as a formal or official response or statement.
- d. MoDOT monitors all procurement activities to detect any possibility of deliberate restraint of competition, collusion among bidders, price-fixing by bidders, or any other anticompetitive conduct by bidders which appears to violate state and federal antitrust laws. Any suspected violation shall be referred to the Missouri Attorney General's Office for appropriate action.

3.1.5 Pursuant to 285.530 RSMo, the bidder must affirm enrollment and participation in a federal work authorization program with respect to the employees proposed to work in connection with the services requested herein by:

- a. Submitting a completed Signature and Identity of Bidder form, attached herein,
- b. Submitting a completed, notarized copy of the applicable portion of Exhibit A, **WORKER ELIGIBILITY VERIFICATION AFFIDAVIT or APPLICANT AFFIDAVIT FOR SOLE-PROPRIETORSHIP OR PARTNERSHIP**, and

3.1.6 *Proposal/Bid Guaranty/Contract Bond:*

- a. Each bid/proposal shall be accompanied by a Bid Bond, Certified Check, Cashier's Check or Bank Money Order payable to the Director of Revenue – Credit State Road Fund for an amount equal to Five Percent (5%) of the amount of the BID submitted. This is to act as a guarantee that the bidder, if awarded the contract, will furnish an acceptable performance and payment bond (Contract Bond) or a cashier's check, a bank money order or a certified check made payable to "Director of Revenue--Credit State Road Fund" in an amount equal to One Hundred (100%) of the contract price.
- b. If a BID BOND is used (in lieu of a certified check, cashier's check, or bank money order), it must be in the form provided and executed by the bidder as principal and by a surety company authorized to do business in the MoDOT as surety. The agent executing the same on behalf of the surety company must attach a current Power of Attorney setting forth his authority to execute the bond involved.
- c. Certified Checks, Cashier's Checks or Bank Money Orders of unsuccessful bidders will be returned as soon as the award is made. The checks or bank money orders of the successful bidder(s) will be retained until the contract is executed and a satisfactory Performance and Payment (Contract Bond) is furnished. Bid Bonds will not be returned except on specific request of the bidder.

3.1.7 Bids will be reviewed to determine if the bid complies with the mandatory requirements, and to determine the lowest and best bid.



- 3.1.8 Contract Award – The contract will be awarded to the lowest responsive bidder determined as specified above.
- a. Award of this bid will be made on an “All Or Nothing” basis using the “lowest and best” principle of award.
- 3.1.9 **NOTE:** The bidder must be in compliance with the laws regarding conducting business in the MoDOT. Within ten (10) business days of notification, the bidder will need to provide a copy of his/her Missouri Secretary of State’s “Certificate of Good Standing” prior to the issuance of any contract or initial purchase order by MoDOT.

#### 4. PRICING PAGE

- 4.1 Structured Telecommunications Cabling System** - The bidder shall provide a firm, fixed price in the table below for providing the deliverables/services in accordance with the provisions and requirements of this RFB. All costs associated with providing the required deliverables/services shall be included in the prices stated below.

Structured Telecommunications Cabling System		
Item #	Description	Original Contract Period <i>Firm, Fixed Price</i>
001	Structured Telecommunications Cabling System as per attached Scope of Work and Specifications.	\$_____

\_\_\_\_\_  
*Signature*

\_\_\_\_\_  
*Date*

**Exhibit A**

**ANTI-COLLUSION STATEMENT**

STATE OF \_\_\_\_\_ )  
 )  
COUNTY OF \_\_\_\_\_ ) SS.

\_\_\_\_\_ being first

duly sworn, deposes and says that he is \_\_\_\_\_  
Title of Person Signing

of \_\_\_\_\_

\_\_\_\_\_  
Name of Bidder

that all statements made and facts set out in the bid for the above project are true and correct; and that the bidder (The person, firm, association, or corporation making said bid) has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with such bid or any contract which may result from its acceptance.

Affiant further certifies that bidder is not financially interested in, or financially affiliated with, any other bidder for the above project.

By \_\_\_\_\_

By \_\_\_\_\_

By \_\_\_\_\_

Sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Notary Public

My Commission Expires \_\_\_\_\_

**Exhibit B**

**PREFERENCE IN PURCHASING PRODUCTS**

DATE: \_\_\_\_\_

The bidders attention is directed to Section 34.076 RSMo 2000 which gives preference to Missouri corporations, firms, and individuals when letting contracts or purchasing products.

Bids/Quotations received will be evaluated on the basis of this legislation.

**All vendors submitting a bid/quotation must furnish ALL information requested below.**

**FOR CORPORATIONS:**

State in which incorporated: \_\_\_\_\_

**FOR OTHERS:**

State of domicile: \_\_\_\_\_

**FOR ALL VENDORS:**

List address of Missouri offices or places of business:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**THIS SECTION MUST BE COMPLETED AND SIGNED:**

**FIRM NAME:** \_\_\_\_\_

**ADDRESS:** \_\_\_\_\_

**CITY:** \_\_\_\_\_ **STATE:** \_\_\_\_\_ **ZIP:** \_\_\_\_\_

**BY (signature required):** \_\_\_\_\_

**Federal Tax I.D. #:** \_\_\_\_\_ **if no Federal Tax I.D. # - list Social Security #:** \_\_\_\_\_

NOTE: For bid to be considered, the "Preference in Purchasing Products" form must be on file in the General Services (Procurement) Division and must be dated in the current calendar year.

## Exhibit C

### **MISSOURI DOMESTIC PRODUCTS PROCUREMENT ACT**

The bidder's attention is directed to the Missouri Domestic Products Procurement Act, Sections 34.350 to 34.359, RsMO, which requires all manufactured goods or commodities used or supplied in the performance of this contract or any subcontract to be manufactured or produced in the United States.

Section 34.355, RsMO, requires the vendor or contractor to certify his compliance with Section 34.353 and, if applicable, Section 34.359, RsMO, at the time of bidding **and** prior to payment. Failure to comply with Section 34.353, RsMO, during the performance of the contract **and** to provide certification of compliance prior to payment will result in nonpayment for those goods or commodities.

Section 34.353.2, RsMO, specifies that it does not apply where the total contract is less than Twenty-Five Thousand Dollars (\$25,000.00). If your total bid is Twenty-Five Thousand Dollars (\$25,000.00) or more, you **must** complete this form as directed below.

**Failure to complete and return this document with this bid will cause the State to presume the manufactured goods or products listed in the bid are not manufactured or produced in the United States, and the bid will be evaluated on that basis. Please read the certification appearing below on this form.**

[    ]    If all the goods or products specified in the attached bid which the bidder proposes to supply to the State shall be manufactured or produced in the "United States" as defined in Section 34.350, RsMO, check the box at left.

[    ]    If only one item of any particular goods or products specified in the attached bid is manufactured or produced in the "United States" as defined in Section 34.350, RsMO, check the box at left and list the items (or item number) here:

[    ]    If any or all of the goods or products specified in the attached bid which the bidder proposes to supply to the State are **not** manufactured or produced in the "United States" as defined in Section 34.350, RsMO, then: (a) check the box at left; (b) list below, by item (or item number), the country other than the United States where each good or product is manufactured or produced; and (c) check the boxes to the left of the paragraphs below if applicable and list the corresponding items (or item numbers) in the spaces provided.

Item (or item number)	Location Where Item Manufactured or Produced

(attach an additional sheet if necessary)

[    ]    The following specified goods or products cannot be manufactured or produced in the United States in sufficient quantities or in time to meet the contract specifications. Items (or item numbers):

[    ]    The following specified goods or products must be treated as manufactured or produced in the United States, in accordance with an existing treaty, law, agreement, or regulation of the United States, including a treaty between the United States and any foreign country regarding export-import restrictions or international trade. Items (or item numbers): \_\_\_\_\_

### **CERTIFICATION**

**By submitting this document, completed as directed above, with a bid, the bidder certifies under penalty of making false declaration (Section 575.060, RsMO) that the information contained in this document is true, correct and complete, and may be relied upon by the State in determining the bidders qualifications under and in compliance with the Missouri Domestic Products Procurement Act.**

**The bidder's failure to complete and return this document with the bid as directed above will cause the State to presume the manufactured goods or products listed in the bid are not manufactured or produced in the United States, and the bid will be evaluated on that basis pursuant to Section 34.353.3(2), RsMO.**

## Exhibit D

### SIGNATURE AND IDENTITY OF BIDDER

The undersigned states that the correct LEGAL NAME and ADDRESS of (1) the individual Bidder, (2) each partner or joint venture (whether individuals or corporations, and whether doing business under a fictitious name), or (3) the corporation (with the state in which it is incorporated) are shown below; that (if not signing with the intention of binding himself to become the responsible and sole contractor) he is the agent of, and duly authorized in writing to sign for the Bidder or Bidders; and that he is signing and executing this (as indicated in the proper spaces below) as the proposal of a

☐ sole individual

( ) partnership

( ) joint venture

( ) corporation, incorporated under laws of state of \_\_\_\_\_

Dated \_\_\_\_\_.

Name of individual, all partners,  
or joint ventures:

Address of each:

[illegible]

doing business under the name of:

Address of principal place of business in Missouri

(If using a fictitious name, show  
this name above in addition  
to legal names)

(If a corporation, show its name above)

ATTEST: (SEAL)

Secretary

Title

(NOTE: If the Bidder is doing business under a FICTITIOUS NAME, the Proposal shall be executed in the legal name of the individual, partners, joint ventures, or corporation, with the legal address shown, and REGISTRATION OF FICTITIOUS NAME filed with the Secretary of State, as required by Sections 417.200 to 417.230, RS Mo. If the Bidder is a CORPORATION NOT ORGANIZED UNDER THE LAWS OF MISSOURI, it shall procure a CERTIFICATE OF AUTHORITY TO DO BUSINESS IN MISSOURI, as required by Section 351.570 and following, RS Mo. A CERTIFIED COPY of such Registration of Fictitious Name or Certificate of Authority to do Business in Missouri shall be filed with the Missouri Highways and Transportation Commission, as required by the Standard specifications, Sec 102.6.6 and 102.6.7.

**Exhibit E**

**APPLICANT AFFIDAVIT FOR SOLE-PROPRIETORSHIP OR PARTNERSHIP**

(a separate affidavit is required for each owner and general partner)

STATE OF \_\_\_\_\_ )  
 ) ss  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me appeared \_\_\_\_\_, personally known to me or proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instruments, who being by me duly sworn, deposed as follows:

My name is \_\_\_\_\_, and I am of sound mind, capable of making this affidavit, and personally certify the facts herein stated, as required by Section 208.009, RSMo, for failure to provide affirmative proof of lawful presence in the United States of America:

I am the \_\_\_\_\_ of \_\_\_\_\_, which is applying for a public benefit (grant, contract, and/or loan) administered/provided by the Missouri Highways and Transportation Commission (MHTC), acting by and through the Missouri Department of Transportation (MoDOT).

I am classified by the United States of America as: (check the applicable box)

☐ a United States citizen. ☐ an alien lawfully admitted for permanent residence.

I am aware that Missouri law provides that any person who obtains any public benefit by means of a willfully false statement or representation, or by willful concealment or failure to report any fact or event required to be reported, or by other fraudulent device, shall be guilty of the crime of stealing pursuant to Section 570.030, RSMo, which is a Class C felony for stolen public benefits valued between \$500 and \$25,000 (punishable by a term of imprisonment not to exceed 7 years and/or a fine not more than \$5,000 – Sections 558.011 and 560.011, RSMo), and is a Class B felony for stolen public benefits valued at \$25,000 or more (punishable by a term of imprisonment not less than 5 years and not to exceed 15 years – Section 558.011, RSMo).

I recognize that, upon proper submission of this sworn affidavit, I will only be eligible for temporary public benefits until such time as my lawful presence in the United States is determined, or as otherwise provided by Section 208.009, RSMo.

I understand that Missouri law requires MHTC/MoDOT to provide assistance in obtaining appropriate documentation to prove citizenship or lawful presence in the United States, and I agree to submit any requests for such assistance to MHTC/MoDOT in writing.

I acknowledge that I am signing this affidavit as a free act and deed and not under duress.

\_\_\_\_\_  
Affiant Signature

\_\_\_\_\_  
Affiant's Social Security Number or  
Applicable Federal Identification Number

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

\_\_\_\_\_  
Notary Public

My commission expires:

**ANNUAL WORKER ELIGIBILITY VERIFICATION AFFIDAVIT**  
(for joint ventures, a separate affidavit is required for each business entity)

Accepted: 9/29/03  
Updated: 01/01/10



Missouri Highways and Transportation Commission  
Standard Bid/Proposal Provisions, General Terms and Conditions and Special Terms and Conditions

**Exhibit F**

**BID BOND**

**KNOW ALL MEN BY THESE PRESENTS**, that we \_\_\_\_\_

\_\_\_\_\_,  
as Principal and \_\_\_\_\_, as Surety are held and firmly bound  
unto the **STATE OF MISSOURI** (acting by and through the **Missouri Highways and Transportation Commission**) in the  
penal sum of:

**Dollars**

(\$ \_\_\_\_\_) to be paid to the **State of Missouri or to the Missouri Highways and Transportation Commission**, to be credited to the State Road Fund, the Principal and Surety binding themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

Sealed with our seals and dated this \_\_\_\_\_

**THE CONDITION OF THIS OBLIGATION** is such that:

**WHEREAS**, the Principal is submitting herewith a bid to the Missouri Highways and Transportation Commission for furnishing a Structured Telecommunications Cabling System as set out in the bid to which this bond is attached.

**NOW THEREFORE**, if the Missouri Highways and Transportation Commission shall accept the bid of the Principal and if said Principal shall properly execute and deliver to the Missouri Highways and Transportation Commission the contract and contract bond in compliance with the requirements of the bid, the specifications and the provisions of law, to the satisfaction of the Highways and Transportation Commission, then this obligation shall be void and of no effect, otherwise to remain in full force and effect.

In the event the said Principal shall, in the judgment of the Missouri Highways and Transportation Commission, fail to comply with any requirement as set forth in the preceding paragraph, then the State of Missouri acting through the Missouri Highways and Transportation Commission shall immediately and forthwith be entitled to recover the full penal sum above set out, together with court costs, attorney's fees and any other expense of recovery.

(SEAL)

\_\_\_\_\_  
Principal

By

\_\_\_\_\_  
Signature

(SEAL)

\_\_\_\_\_  
Surety

By

\_\_\_\_\_  
Attorney-in-Fact

**NOTE:** This bond must be executed by the PRINCIPAL and by a CORPORATE SURETY authorized to conduct surety business in the State of Missouri.

**Exhibit G**

**MISSOURI SERVICE-DISABLED VETERAN BUSINESS PREFERENCE**

By virtue of statutory authority, RSMo 34.074, a preference will be given all contracts for the performance of any job or service to service-disabled veteran business either doing business as Missouri firms, corporations, or individuals; or which maintain Missouri offices or places of business, when the quality of performance promised is equal or better and the price quoted is the same or less or whenever competing bids, in their entirety, are comparable.

Definitions:

**Service-Disabled Veteran** is defined as any individual who is disabled as certified by the appropriate federal agency responsible for the administration of veterans' affairs.

**Service-Disabled Veteran Business** is defined as a business concern:

- a. Not less than fifty-one (51) percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than fifty-one (51) percent of the stock of which is owned by one or more service-disabled veterans; and
- b. The management and daily business operations of which are controlled by one or more service-disabled veterans.

If a bidder meets the definitions of a service-disabled veteran and a service-disabled veteran business as defined in 34.074 RSMo and is either doing business as a Missouri firm, corporation, or individual; or maintains a Missouri office or place of business, the bidder **must** provide the following with the bid in order to receive the Missouri service-disabled veteran business preference over a non-Missouri service-disabled veteran business when the quality of performance promised is equal or better and the price quoted is the same or less or whenever competing bids, in their entirety, are comparable:

- a. A copy of a letter from the Department of Veterans Affairs (VA), or a copy of the bidder's discharge paper (DD Form 214, Certificate of Release or Discharge from Active Duty) from the branch of service the bidder was in, stating that the bidder has a service-connected disability rating ranging from 0 to 100% disability; and
- b. A completed copy of this exhibit

(NOTE: For ease of evaluation, please attach copy of the above-referenced letter from the VA or a copy of the bidder's discharge paper to this Exhibit.)

By signing below, I certify that I meet the definitions of a service-disabled veteran and a service-disabled veteran business as defined in 34.074 RSMo and that I am either doing business as a Missouri firm, corporation, or individual; or maintain Missouri offices or places of business at the location(s) listed below.

**Veteran Information**

**Business Information**

Service-Disabled Veteran's Name, (Please Print)

Service-Disabled Veteran Business Name

*Service-Disabled Veteran's Signature*

Missouri Address of Service-Disabled Veteran  
Business

**Missouri Highways and Transportation Commission**  
**Standard Bid/Proposal Provisions, General Terms and Conditions and Special Terms and Conditions**

**STANDARD SOLICITATION PROVISIONS**

- a. The Missouri Department of Transportation (MoDOT) reserves the right to reject any or all bids/quotes/proposals, and to accept or reject any items thereon, and to waive technicalities. In case of error in the extension of prices in the bid/quote/proposal, unit prices will govern.
- b. All bids/quotes/proposals must be signed with the firm name and by a responsible officer or employee. Obligations assumed by such signature must be fulfilled.
- c. By virtue of statutory authority, a preference will be given to materials, products, supplies, provisions and all other articles produced, manufactured, made or grown, within the State of Missouri.
- d. Time of delivery is a part of the consideration and, if not otherwise stated in the solicitation documents, must be stated in definite terms by the Bidder/Offeree and must be adhered to. If time varies on different items, the Bidder/Offeree shall so state.
- e. If providing bids/quotes/proposals for commodities, the Bidder/Offeree will state brand or make on each item. If bidding or proposing other than the make, model or brand specified, the manufacturer's name, model number or catalog number must be given.
- f. **For bids/proposals of \$25,000 or more**, no bids/proposals by telephone, telegram or telefax will be accepted.
- g. The date specified for the returning of bids/quotes/proposals is a firm deadline and all bids/quotes/proposals must be received at the designated office by that time. The Department does not recognize the U.S. Mail, Railway Express Agency, Air Express, or any other organization, as its agent for purposes of accepting proposals. All proposals arriving at the designated office after the deadline specified will be rejected.

**GENERAL TERMS AND CONDITIONS**

**General Performance**

- a. This work is to be performed under the general supervision and direction of the Missouri Department of Transportation (MoDOT) and, if awarded any portion of the work, the Contractor agrees to furnish at his own expense all labor and equipment required to complete the work, it being expressly understood that this solicitation is for completed work based upon the price(s) specified and is not a solicitation for rental of equipment or employment of labor by MoDOT, and MoDOT is to have no direction or control over the employees used by the Contractor in performance of the work.

**Deliveries**

- a. Unless otherwise specified on the solicitation documents or purchase order, suppliers shall give at least 24 hours advance notice of each delivery. Delivery will only be received between the hours of 8:00 a.m. to 3:00 p.m., Monday through Friday. Material arriving after 3:00 p.m. will not be unloaded until the following workday. No material will be received on Saturday, Sunday or state holidays.
- b. If the prices bid herein include the delivery cost of the material, the Contractor agrees to pay all transportation charges on the material as FOB - Destination. Freight costs must be included in the unit price bid and not listed as a separate line item.
- c. Any demurrage is to be paid by the Contractor direct to the railroad or carrier.

**Nondiscrimination**

- a. The Contractor shall comply with the Regulations relative to nondiscrimination in federally-assisted programs of the Department of Transportation, Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.
- b. All solicitations either by competitive bidding or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials or leases of the Contractor's obligations under this contract and the Regulations, will be relative to nondiscrimination on the grounds of race, color, or national origin.
  - 1) **Sanctions for Noncompliance:** In the event of the Contractor's noncompliance with the nondiscrimination provisions of this contract, MoDOT shall impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:
    - i. withholding of payments to the Contractor under the contract until the Contractor complies, and/or,
    - ii. cancellation, termination or suspension of the contract, in whole or in part.

**Contract/Purchase Order**

- a. By submitting a bid/quote/proposal, the Bidder/Offeree agrees to furnish any and all equipment, supplies and/or services specified in the solicitation documents, at the prices quoted, pursuant to all requirements and specifications contained therein.
- b. A binding contract shall consist of: (1) the solicitation documents, amendments thereto, and/or Best and Final Offer (BAFO) request(s) with any changes/additions, (2) the Contractor's proposal and/or submitted pricing, and (3) the MHTC's acceptance of the proposal and/or bid by purchase order or post-award contract.
- c. A notice of award does not constitute an authorization for shipment of equipment or supplies or a directive to proceed with services. Before providing equipment, supplies and/or services, the Contractor must receive a properly authorized purchase order and/or notice to proceed.
- d. The contract expresses the complete agreement of the parties and performance shall be governed solely by the specifications and requirements contained therein. Any change, whether by modification and/or supplementation, must be accomplished by a formal contract amendment signed and approved by and between the duly authorized representative of the Contractor and the duly authorized representative of the MHTC, by a modified purchase order prior to the effective date of such modification. The Contractor expressly and explicitly understands and agrees that no other method and/or no other document, including correspondence, acts, and oral communications by or from any person, shall be used or construed as an amendment or modification.

**Subcontracting**

- a. It is specifically understood that no portion of the material or any interest in the contract, shall be subcontracted, transferred, assigned or otherwise disposed of, except with the written consent of MoDOT. Request for permission to subcontract or otherwise dispose of any part of the work shall be in writing to MoDOT and accompanied by documentation showing that the organization which will perform the work is particularly experienced and equipped for such work.

**Missouri Highways and Transportation Commission**  
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- b. Consent to subcontract or otherwise dispose of any portion of the work shall not be construed to relieve the Contractor of any responsibility for the production and delivery of the contracted work and the completion of the work within the specified time.
- c. All payments for work performed by a subcontractor shall be made to the Contractor to whom the contract was awarded and the purchase order issued.

**Invoicing and Payment**

- a. MoDOT is exempt from paying Missouri Sales Tax, Missouri Use Tax and Federal Excise Tax. However, the Contractor may themselves be responsible for the payment of taxes on materials they purchase to fulfill the contract. A Project Tax Exemption Certificate will be furnished to the successful Bidder/Offeror upon request if applicable.
- b. Each invoice should be itemized in accordance with items listed on the purchase order and/or contract. The statewide financial management system has been designed to capture certain receipt and payment information. Therefore, each invoice submitted must reference the purchase order number and must be itemized in accordance with items listed on the purchase order. Failure to comply with this requirement may delay processing of invoices for payment.
- c. Unless otherwise provided for in the solicitation documents, payment for all equipment, supplies, and/or services required herein shall be made in arrears. The Missouri Highways and Transportation Commission (MHTC) shall not make any advance deposits.
- d. The MHTC assumes no obligation for equipment, supplies, and/or services shipped or provided in excess of the quantity ordered. Any authorized quantity is subject to the MHTC's rejection and shall be returned at the Contractor's expense.
- e. The MHTC reserves the right to purchase goods and services using the state-purchasing card.

**Applicable Laws and Regulations**

- a. The contract shall be construed according to the laws of the State of Missouri. The Contractor shall comply with all local, state, and federal laws and regulations related to the performance of the contract.
- b. The Contractor must be registered and maintain good standing with the Secretary of State of the State of Missouri and other regulatory agencies, as may be required by law or regulations. Prior to the issuance of a purchase order and/or notice to proceed, the Contractor may be required to submit to MoDOT a copy of their current Authority Certificate from the Secretary of State of the State of Missouri.
  - 1) Prior to the issuance of a purchase order and/or notice to proceed, all **out-of-state** Contractors **providing services** within the state of Missouri must submit to MoDOT a copy of their current Transient Employer Certificate from the Department of Revenue, in addition to a copy of their current Authority Certificate from the Secretary of State of the State of Missouri.
- c. The exclusive venue for any legal proceeding relating to or arising, out of the contract shall be in the Circuit Court of Cole County, Missouri.

**Executive Order**

- a. The Contractor shall comply with all the provisions of Executive Order 07-13, issued by the Honorable Matt Blunt, Governor of Missouri, on the sixth (6<sup>th</sup>) day of March, 2007. This Executive Order, which promulgates the State of Missouri's position to not tolerate persons who contract with the state engaging in or supporting illegal activities of employing individuals who are not eligible to work in the United States, is incorporated herein by reference and made a part of this Agreement.
  - 1) "By signing this Agreement, the Contractor hereby certifies that any employee of the Contractor assigned to perform services under the contract is eligible and authorized to work in the United States in compliance with federal law."
  - 2) In the event the Contractor fails to comply with the provisions of the Executive Order 07-13, or in the event the Commission has reasonable cause to believe that the contractor has knowingly employed individuals who are not eligible to work in the United States in violation of federal law, the Commission reserves the right to impose such contract sanctions as it may determine to be appropriate, including but not limited to contract cancellation, termination or suspension in whole or in part or both.
  - 3) The Contractor shall include the provisions of this paragraph in every subcontract. The Contractor shall take such action with respect to any subcontract as the Commission may direct as a means of enforcing such provisions, including sanctions for noncompliance.

**Preferences**

- a. In the evaluation of bids/quotes/proposals, preferences shall be applied in accordance with Chapter 34 RSMo. Contractors should apply the same preferences in selecting subcontractors.
- b. By virtue of statutory authority, RSMo. 34.076 and 34.350 to 34.359, a preference will be given to materials, products, supplies, provisions and all other articles produced, manufactured, made or grown within the State of Missouri. Such preference shall be given when quality is equal or better and delivered price is the same or less.
  - 1) If attached, the document entitled **"PREFERENCE IN PURCHASING PRODUCTS"** should be completed and returned with the solicitation documents.
  - 2) If attached, the document entitled **"MISSOURI DOMESTIC PRODUCTS PROCUREMENT ACT"** should be completed and returned with the solicitation documents. **Applies if bid is Twenty-Five Thousand Dollars (\$25,000.00) or more.**
- c. By virtue of statutory authority, RSMo 34.074, a preference will be given all contracts for the performance of any job or service to service-disabled veteran business either doing business as Missouri firms, corporations, or individuals; or which maintain Missouri offices or places of business, when the quality of performance promised is equal or better and the price quoted is the same or less or whenever competing bids, in their entirety, are comparable.
  - 1) If attached, the document entitled **"MISSOURI SERVICE-DISABLED VETERAN PREFERENCE"** should be completed and returned with the solicitation documents.

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- d. In the event of a tie of low bids, the MHTC reserves the right to establish the method to be used in determining the award

**Remedies and Rights**

- a. No provision in the contract shall be construed, expressly or implied, as a waiver by the MHTC of any existing or future right and/or remedy available by law in the event of any claim by the MHTC of the Contractor's default or breach of contract.
- b. The Contractor agrees and understands that the contract shall constitute an assignment by the Contractor to the MHTC of all rights, title and interest in and to all causes of action that the Contractor may have under the antitrust laws of the United States or State of Missouri for which causes of action have accrued or will accrue as the result of or in relation to the particular equipment, supplies, and/or services purchased or produced by the Contractor in the fulfillment of the contract with the MHTC.
- c. In the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the Contractor may request MoDOT to enter into such litigation to protect the interests of the MHTC, and, in addition, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

**Cancellation of Contract**

- a. The MHTC may cancel the contract at any time for a material breach of contractual obligations or for convenience by providing the Contractor with written notice of cancellation. Should the MHTC exercise its right to cancel the contract for such reasons, cancellation will become effective upon the date specified in the notice of cancellation sent to the Contractor.
- b. If the MHTC cancels the contract for breach, the MHTC reserves the right to obtain the equipment, supplies, and/or services to be provided pursuant to the contract from other sources and upon such terms and in such manner as the MHTC deems appropriate and charge the Contractor for any additional costs incurred thereby.

**Bankruptcy or Insolvency**

- a. Upon filing for any bankruptcy or insolvency proceeding by or against the Contractor, whether voluntary or involuntary, or upon the appointment of a receiver, trustee, or assigned the benefit or creditors, the Contractor must notify MoDOT immediately. Upon learning of any such actions, the MHTC reserves the right, at its sole discretion, to either cancel the contract or affirm the contract and hold the Contractor responsible for damages.

**Inventions, Patents, and Copyrights**

- a. The Contractor shall defend, protect, and hold harmless the MHTC, its officers, agents, and employees against all suits of law or in equity resulting from patent and copyright infringement concerning the Contractor's performance or products produced under the terms of the contract.

**Inspection and Acceptance**

- a. No equipment, supplies, and/or services received by MoDOT pursuant to a contract shall be deemed accepted until MoDOT has had reasonable opportunity to inspect said equipment, supplies, and/or services.
- b. All equipment, supplies, and/or services which do not comply with the specifications and/or requirements or which are otherwise unacceptable or defective may be rejected. In addition, all equipment, supplies, and/or services which are discovered to be defective or which do not conform to any warranty of the Contractor upon inspection (or at any later time if the defects contained were not reasonably ascertainable upon the initial inspection) may be rejected.
- c. The MHTC reserves the right to return any such rejected shipment at the Contractor's expense for full credit or replacement and to specify a reasonable date by which replacements must be received.
- d. The MHTC's right to reject any unacceptable equipment, supplies, and/or services shall not exclude any other legal, equitable or contractual remedies the MHTC may have.

**Warranty**

- a. The Contractor expressly warrants that all equipment, supplies, and/or services provided shall: (1) conform to each and every specification, drawing, sample or other description which was furnished to or adopted by MoDOT, (2) be fit and sufficient for the purpose expressed in the solicitation documents, (3) be merchantable, (4) be of good materials and workmanship, and (5) be free from defect.
- b. Such warranty shall survive delivery and shall not be deemed waived either by reason of the MHTC's acceptance of or payment for said equipment, supplies, and/or services.

**Status of Independent Contractor**

- a. The Contractor represents itself to be an independent Contractor offering such services to the general public and shall not represent itself or its employees to be an employee of the MHTC. Therefore, the Contractor shall assume all legal and financial responsibility for taxes, FICA, employee fringe benefits, workers' compensation, employee insurance, minimum wage requirements, overtime, etc., and agrees to indemnify, save and hold the MHTC, its officers, agents and employees harmless from and against any and all losses (including attorney fees) and damage of any kind related to such matters.

**Indemnification**

- a. The Offeror shall defend, indemnify and hold harmless the Commission, including its members and department employees, from any claim or liability whether based on a claim for damages to real or personal property or to a person for any matter relating to or arising out of the Offeror's performance of its obligations under this Agreement.

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**SPECIAL TERMS AND CONDITIONS**

**Insurance**

The Contractor shall maintain or cause to be maintained at Contractor's own expense commercial general liability, automobile liability, worker's compensation insurance against negligent acts, errors or omissions of the Contractor, or its subcontractors and anyone directly or indirectly employed by any of them. Any insurance policy required as specified in this Section shall be written by a company that is licensed and authorized to issue such insurance in the state of Missouri and shall provide insurance coverage for not less than the following limits of liability:

- a. General Liability: Not less than \$500,000 for any one person in a single accident or occurrence, and not less than \$3,000,000 for all claims arising out of a single occurrence;
- b. Automobile Liability: Not less than \$500,000 for any one person in a single accident or occurrence, and not less than \$3,000,000 for all claims arising out of a single occurrence;
- c. Missouri State Workmen's Compensation policy or equivalent in accordance with state law.

Upon request from the Commission, the Contractor shall provide the Commission with certificates of insurance evidencing the required coverage and that such insurance is in effect.

**Proposal/Bid Guaranty/Contract Bond**

- a. Each proposal shall be accompanied by a Bid Bond, Certified Check, Cashier's Check or Bank Money Order payable to the Director of Revenue – Credit State Road Fund for an amount equal to Five Percent (5%) of the amount of the BID submitted. This is to act as a guarantee that the bidder, if awarded the contract, will furnish an acceptable performance and payment bond (Contract Bond) or a cashier's check, a bank money order or a certified check made payable to "Director of Revenue--Credit State Road Fund" in an amount equal to One Hundred (100%) of the contract price.
- b. If a BID BOND is used (in lieu of a certified check, cashier's check, or bank money order), it must be in the form provided and executed by the bidder as principal and by a surety company authorized to do business in the State of Missouri as surety. The agent executing the same on behalf of the surety company must attach a current Power of Attorney setting forth his authority to execute the bond involved.
- c. Certified Checks, Cashier's Checks or Bank Money Orders of unsuccessful bidders will be returned as soon as the award is made. The checks or bank money orders of the successful bidder(s) will be retained until the contract is executed and a satisfactory Performance and Payment (Contract Bond) is furnished. Bid Bonds will not be returned except on specific request of the bidder.

**Prevailing Wage**

- a. If the bid/quote/proposal is accepted, the vendor will be required to comply with the prevailing wages as fixed by the Missouri Department of Labor and Industrial Relations, in effect as of the date of the issuance of the solicitation, for each affected craft and type of workmen in the following county(ies): GREENE. The Annual Wage Order # 16 may be inspected at any District Office or at the Central Office in Jefferson City, MO.
- b. The Contractor shall submit notarized weekly payroll affidavit documentation included with the project request for payment. The successful vendor must provide a lien waiver from all material suppliers.

**"EXCESSIVE UNEMPLOYMENT IS IN EFFECT"**

**Only Missouri laborers and laborers from nonrestrictive states are allowed by law to be employed on Missouri's public works projects when the unemployment rate exceeds 5 percent for two consecutive months. (See Sections 290.550 through 290.580 RSMo).**

***Restrictive states are as follows: Alaska, Arizona, California, Colorado, Connecticut, Delaware, District of Columbia, Florida, Idaho, Illinois, Iowa, Maine, Massachusetts, Mississippi, Montana, Nevada, New Jersey, North Dakota, Oklahoma, South Dakota, and the U.S. Virgin Islands, West Virginia and Wyoming.***

**Permits, Licenses and Safety Issues**

- a. The contract price shall include any necessary permits and licenses required by law incidental to the work. Local ordinances requiring building permits are not applicable to state agencies.
- b. The Contractor will comply with local laws involving safety in the prosecution of the work.

**Award**

- b. Award of this bid/quote/proposal will be made on an "All Or Nothing" basis using the "lowest and best" principle of award.

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**Standard Bid/Proposal Provisions, General Terms and Conditions and Special Terms and Conditions**

**Failure to Execute Contract**

- a. Failure to execute the contract and file acceptable performance payment (Contract Bond) or cashier's check, bank money order or certified check within **15 days** after the contract has been mailed to the bidder shall be just cause for the cancellation of the award and the forfeiture of the proposal guaranty. Award may then be made to the next lowest responsible bidder, or the work may be re-advertised and performed under contract or otherwise, as the Commission may decide. No contract shall be considered effective until it has been executed by all parties thereto.

**Notice to Proceed**

- a. Within **30 days** after the execution of the contract, a "**Notice to Proceed**" will be issued by the Department. A purchase order will be attached to the "Notice to Proceed," which will specify the date or dates that the Contractor can start delivery, roadway or stockpile delivery and will also include the completion dates. These dates will be in accordance with the dates shown in the proposal.

**Delivery – Additional Requirements**

- a. The Contractor shall furnish the Missouri Department of Transportation with a planned delivery schedule at least 16 hours before starting delivery.
- 1) Notification should be during the normal workday preceding the day on which the Contractor desires to initiate delivery.
  - 2) It will be necessary for a representative of the Missouri Department of Transportation to be present when the material is delivered.
- b. No deliveries will be made on **Saturdays, Sundays and holidays** unless specifically authorized by the engineer.
- c. The following days shall be construed as **official holidays** under the terms of the contract:

January 1	New Year's Day
Third Monday in January	Martin Luther King, Jr.'s Birthday
February 12	Lincoln's Birthday
Third Monday in February	Washington's Birthday
May 8	Truman's Birthday
Last Monday in May	Memorial Day
July 4	Independence Day
First Monday in September	Labor Day
Second Monday in October	Columbus Day
November 11	Veteran's Day
Fourth Thursday in November	Thanksgiving Day
December 25	Christmas Day

- d. When any of the above **holidays falls** on a **Sunday**, the holiday will be observed on the following **Monday**; when any of the above **holidays falls** on a **Saturday**, the **holiday** will be observed on the immediately preceding **Friday**.

**Temporary Suspension of Work**

- a. The **District Engineer** shall have authority to suspend work wholly or in part for such period or periods as may be deemed necessary when weather or other conditions are such that in the opinion of the engineer, the work may be done at a later time with advantage to the Department or for failure on the part of the Contractor to comply with any of the provisions of the Contract.
- b. If the Department suspends the work for its own advantages and not because of the Contractor's failure to comply with the Contract, the Contractor will be allowed an equal number of calendar days after the completion date for the completion of the work. The Department may at its discretion give the Contractor an extension of time for completing the work where the Contractor incurs delays for causes beyond his control.
- c. Normal rainfall is not considered a cause qualifying for an extension of time. Claim for extension of time for all causes must be submitted by the Contractor in writing within **30 Days** after the claimed cause for the delay has ceased to exist.

**Cancellation of Contract**

- a. If the Contractor/supplier fails to carry out the performance of the work with sufficient workmen and equipment to insure the completion of the delivery within the time specified or becomes insolvent or is adjudicated a bankrupt or commits any act of bankruptcy or insolvency or allows any final judgment to stand against him for a period of ten (10) days, the Missouri Department of Transportation may give notice in writing by registered mail to the Contractor/supplier and the surety of such delay, neglect or default.
- b. If, within ten (10) days after such notice the Contractor/supplier does not proceed to remedy to the satisfaction of the Department's representatives the faults specified in said notice, or the surety does not proceed to take over the deliveries, the Department shall have full power and authority, without impairing the obligation of the Contractor/supplier under the contract or the surety under the bond, to take over the completion of the work and arrange for the shipment of any materials necessary to complete the work and the Contractor/supplier and the surety will be responsible for any additional costs incurred by the Department in obtaining the completion of the deliveries.

**Liquidated Damages**

- a. In the event the successful Contractor fails to deliver the material within the time specified, the Department and the public will sustain damages because of such delay in delivery, the exact extent of which would be difficult to ascertain, and in order to liquidate such damage in advance it is agreed that the **sum of two-hundred fifty dollars (\$250.00) per day**, for each assessable calendar day on which the delivery has not been completed, is reasonable and the best estimate which the parties can arrive at as liquidated damages, and it is therefore agreed that said amount will be withheld from payments due the Contractor or otherwise collected from the Contractor as liquidated damages.

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- b. **Saturdays, Sundays, holidays and days whereas the Department has suspended work** shall not be assessable days.

**Prohibition Of Employment Of Unauthorized Aliens:**

- a. Pursuant to RSMo 285.530 (1), no business entity or employer shall knowingly employ, hire for employment, or continue to employ an unauthorized alien to perform work within the state of Missouri. As a condition for the award of any contract or grant in excess of five thousand dollars by the state or by any political subdivision of the state to a business entity, or for any business entity receiving a state-administered or subsidized tax credit, tax abatement, or loan from the state, the business entity shall, by sworn affidavit and provision of documentation, affirm its enrollment and participation in a federal work authorization program with respect to the employees working in connection with the contracted services. Every such business entity shall sign an affidavit affirming that it does not knowingly employ any person who is unauthorized alien in connection with the contracted services. [RSMO 285.530 (2)] A copy of the affidavit referenced above is provided within this document.

E-Verify is an example of a federal work authorization program. Acceptable enrollment and participation documentation consists of **completed** copy of the E-Verify Memorandum of Understanding (MOU). For vendors that are not already enrolled and participating in a federal work authorization program, E-Verify is available at [http://www.dhs.gov/xprevprot/programs/gc\\_1185221678150.shtm](http://www.dhs.gov/xprevprot/programs/gc_1185221678150.shtm).

**Construction Safety Program**

- a. Missouri law, 292.675 RSMo, requires the awarded Contractor and its subcontractor(s) to provide a ten-hour occupational safety and health administration (OSHA) construction safety program (or a similar program approved by the Missouri Department of Labor and Industrial Relations as a qualified substitute) for their on-site employees (laborers, workmen, drivers, equipment operators, and craftsmen) who have not previously completed such a program and are directly engaged in actual construction of the improvement (or working at a nearby or adjacent facility used for construction of the improvement). The Contractor and its subcontractor(s) shall require all such employees to complete this ten-hour program, pursuant to 292.675 RSMo, unless they hold documentation on their prior completion of said program. Penalties for non-compliance include Contractor forfeiture to the Commission in the amount of \$2,500, plus \$100 per contractor and subcontractor employee for each calendar day such employee is employed beyond the elapsed time period for required program completion under 292.675 RSMo.